



CAL 1190

CAL 1190 has been chosen by both small and large shops, regardless of available equipment, due to the desirable properties contained in its composition. To enumerate some of them:

HIGH ELECTRICAL CONDUCTIVITY: Promotes gas-scouring action, through profuse gassing at the electrodes.

GOOD WETTING: Good wetting is essential so that the soils quickly and thoroughly penetrated, thus permitting other cleaning phenomena, such as emulsification, to take place.

EXCELLENT EMULSIFYING AND SUSPENDING ABILITY: Suspension of soil (smut) and emulsification (oil, etc.,) are essential to a good soaker tank cleaner so that soil may be loosened and removed from the metal surface and kept from re-depositing.

PROPER FOAM CONTROL: CAL 1190 contains a controlled foaming agent, so as to form a sufficient foam blanket to prevent spattering of alkaline solutions into the air when gas bubbles break above the surface. This control allows freedom of overflow of the tank, while allowing the maximum safety for use.

LONG SOLUTION LIFE: CAL 1190 has a high soil load tolerance and requires a relatively low using concentration – a measure of added economy.

GENERAL RECOMMENDATIONS

The most important factors to consider for the most efficient operation are (1) compound, (2) concentration, (3) temperature, (4) current density, and (5) time. The first three factors are usually influenced by the length of time permitted for the cleaning. Time, of course, is flexible, but in conveyerized systems it is fixed within definite limits. It has been stated that the general “rule” regarding relationships between these factors is: the higher the concentration (within limits), the higher the temperature and the higher the current density, the faster will be the cleaning.

Current density is, by definition, the total current flowing through the solution divided by the square feet of metal being cleaned. To increase the current density, we increase the current flowing through the tank by increasing the CONCENTRATION OF CLEANER and/or increasing the TEMPERATURE, to attain better conductivity. Another way is to reduce the amount of work being cleaned at one time. Providing all factors remain the same, we could double the current density by removing one-half the parts from the solution.

RECOMMENDATIONS FOR USE OF CAL 1190

Ferrous Metals	Direct Current	Reverse Current
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	4-10 oz. per gal @ 200° F Immerse ½ to 3 minutes	4 – 12 oz. per gal @ 200° F Immerse one to three minutes
Cuprous Metals ⁰	4 – 6 oz. per gal @ 180° F - 200° F Immerse ½ to 3 minutes	4 – 8 oz. per gal @ 150° F - 180° F Immerse ¼ to 1 minute
Zinc & Aluminum Die Cast	2 – 4 oz. per gal @ 130° F - 140° F Immerse 10 seconds to 1 minute	2 – 4 oz. per gal @ 130° F - 140° F Immerse 5 seconds to 1 minute, MAX

Caution: Concentration should never be lower than 2 oz. per gal or sever attack on metals will result.

PRECLEANING

If a pre-clean is necessary, instead of two electrolytic cycles it may be advisable (because of equipment availability, etc.) to pre-clean by one of the following methods:

1. Hot alkaline soaker tank cleaning, using CAL 181, 4 – 8 oz. per gal., at 180° - 200° F followed by a rinse.
2. SUPER SOLV and SOLVENT 1 to 4. Presoak at room temperature, followed by a thorough rinsing. It is imperative when using solvent cleaners to thoroughly rinse so that solvent is not carried over into the electrolytic bath where it would eventually find its way to the plating bath. If this happens numerous rejects are bound to be obtained.
3. Cleaning in Industrial Washer with either CAL SOLV at 1:100 at 150° to 160° F water solution or with CAL 305 SPRAY at ¼ to ½ oz. per gal. at 160° to 180° F.

Finally, it is highly important that rinses be kept fresh with constantly flowing water. Failure to provide adequate rinsing facilities is sure to result in re-soiled parts, plating batch contamination, etc. Nowhere is good rinsing as important as in electrolytic cleaning.